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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,937	01/15/2004	Michael E. Hauger	80113-0375 (BCS03208)	6530
20480	7590	06/24/2005	EXAMINER	
STEVEN L. NICHOLS RADER, FISHMAN & GRAVER PLLC 10653 S. RIVER FRONT PARKWAY SUITE 150 SOUTH JORDAN, UT 84095			JONES, STEPHEN E	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/758,937	Applicant(s) HAUGER ET AL.	
	Examiner Stephen E. Jones	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-25 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 6 and 8-11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/15/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Snodgrass et al.

Snodgrass et al. teaches a microwave attenuator including: series pin diodes (D2a, D2b); shunt branches connected to the series circuit; the shunt branches including pin diodes (D1a, D2b, note that the Snodgrass shunt diode D2b should be labeled D1b) (Claim 2); the shunt circuits include parallel inductors (e.g. L1b) and capacitors (e.g. C1b); the capacitors are selected to tune out the inductance in the

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resistor/diode combination in the shunt branch (i.e. it compensates for a reactance (e.g. see Col. 6); it is inherent that the parallel inductor/capacitor configuration is resonant at some frequency based on the values of the elements; and inherently the circuit would function to reduce tilt effects in the same manner as the presently claimed invention, especially since it is the same structure as the presently claimed structure and the tuning out of the inductance by the capacitor of Snodgrass provides compensation for reactance in the circuit in the same manner as the present invention function (Claims 1, 12).

4. Claims 1-3, 5, 7, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Terai (JP06152301).

Terai (JP06152301) (Figs. 1-2) teaches an RF attenuator including: series and shunt pin diodes; Fig. 2 shows that the choke circuit inductances (13) can be replaced with parallel circuits providing various resonances (e.g. see the machine translation page 3, sections 25-26); inherently the circuit would function the same as the presently claimed structure including to reduce tilt effects in the same manner as the presently claimed invention, especially since it is the same structure as the presently claimed structure and provides a wider operating band (i.e. provides acceptable performance at a wide range of frequencies, i.e. the difference in amplitude between the outer ends of operating frequencies is minimized/tilt is reduced to an acceptable/useful level) (Claims 1, 5, 12,); a shunt and series bias is provided (C, B) (Claim 3, 13); L1 and C are parallel

(Claim 7); and the circuit includes inputting (receiving) and outputting (transmitting) the RF signal (Claim 14).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terai (JP06152301).

Terai teaches shunt circuits as described above, but does not explicitly teach that the parallel resonant circuit is resonant at a frequency higher than the highest signal frequency. Also, it is well-known to use shunt circuits to remove harmonics (i.e. undesired multiples of above the operating frequency).

It would have been considered obvious to one of ordinary skill in the art to have tuned the shunt resonances of Terai to have been multiples/harmonics of the desired signal frequency, especially since Terai teaches that the shunt circuit is a high-frequency choke circuit and because it would have provided the well-known advantageous benefit of reducing unwanted harmonics between the receiver and the transmitter, thereby suggesting the obviousness of such a modification.

Allowable Subject Matter

8. Claims 6 and 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. Claims 15-25 are allowed.
10. The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claims 15-25, the prior art of record does not teach the claimed invention including: a first and second shunt branch with each including a plurality of shunt diodes and each having a parallel resonant circuit coupled in series to the respective shunt branch.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Burns et al. teaches a microwave attenuator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEJ


STEPHEN E. JONES
PRIMARY EXAMINER